



# **Defense Acquisition Program Support Reviews: Methodology, Process & Products**

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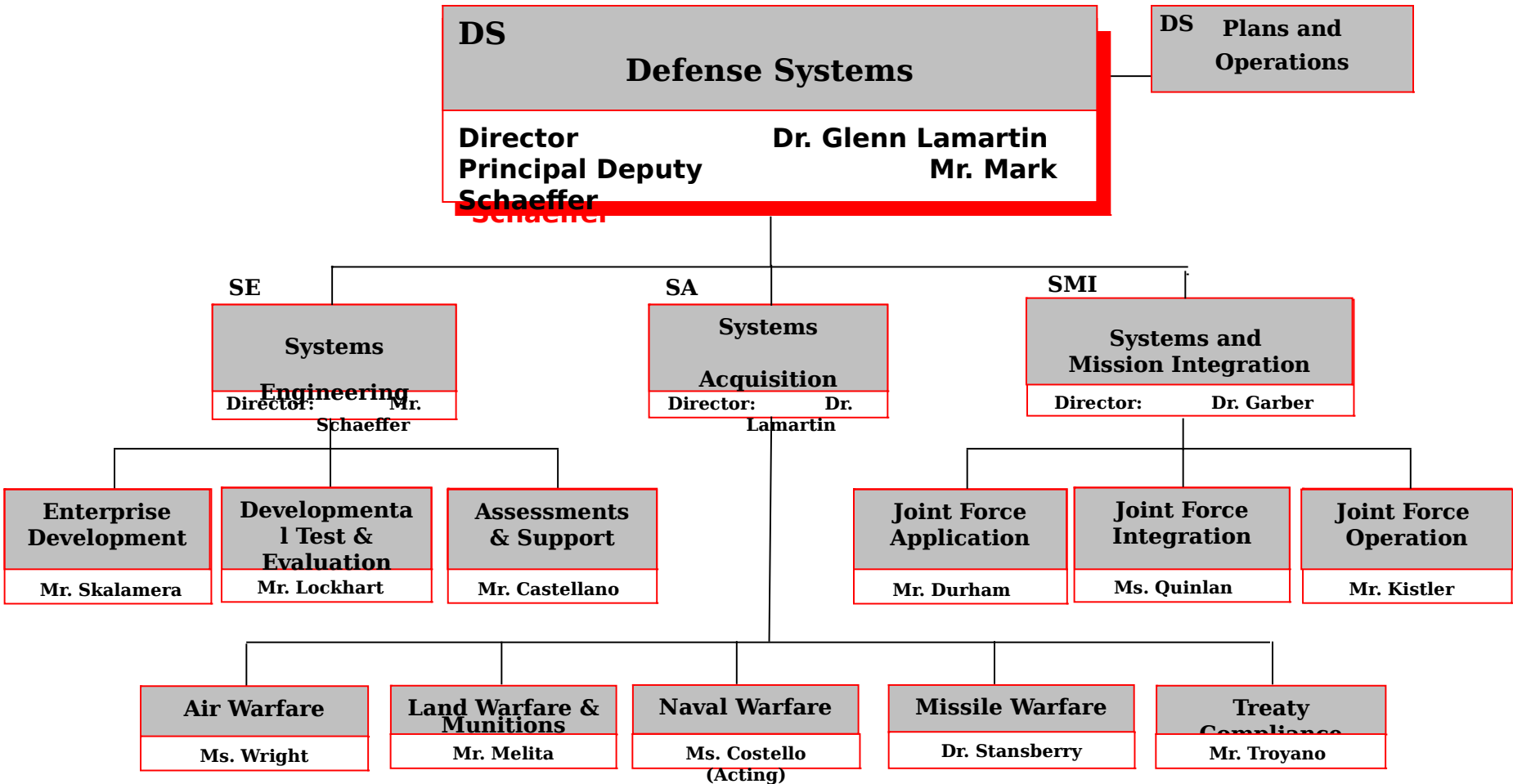
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# Reemphasis on Systems Engineering within OUSD (AT&L)



- Restructure of “Strategic & Tactical Systems” (now “Defense Systems”) in 2002 was responsive to USD(AT&L) Imperatives
  1. “Provide a context within which I can make decisions about individual programs”
  2. “Achieve credibility and effectiveness in the acquisition and logistics support processes”
  3. “Help drive good systems engineering practice back into the way we do business”
- New “Systems Engineering” organization developed to:
  - » Set policies for good SE practices and see to their implementation
  - » Provide constructive program reviews to support OSD decision-makers
    - > Posture programs for success
    - > Provide insights early and maintain continuous engagement
  - » Provide independent expert support to PMs who request it
  - » Assess causal factors that impact meeting performance expectations

# Defense Systems Organization



# Evolution of Defense Acquisition Program Support (DAPS) Methodology



- 1999 - 2003: OSD developed Tri-Service Assessment Initiative (TAI)
  - » Provide non-advocate assistance to PMs
  - » Fee-for-Service Independent Expert Reviews
  - » Initial software focus expanded to full program assessments
  - » Successfully conducted 50 + TAI Assessments
- 2003 - 2004: Focus broadened to support OSD oversight reviews
  - » Renewed interest in OSD oversight for decision making, re-energizing systems engineering, ensuring program success
  - » Successfully completed 3 pilot reviews
- DAPS Assessment Methodology built upon TAI assessment typology
  - » Focus is primarily on ACAT ID and 1AM programs
  - » Key assessment areas retained
    - > Requirements, Resources, Management, Process, Product, and Environment
  - » Assessment areas modified to emphasize systems engineering
  - » More detailed criteria and related questions incorporated as guidelines
  - » Scope now addresses pre-milestone decision criteria
  - » TAI reviews will continue to provide non-advocate reviews for PMs
    - > TAI Management being transitioned to DCMA
    - > TAI will use DAPS Assessment Methodology

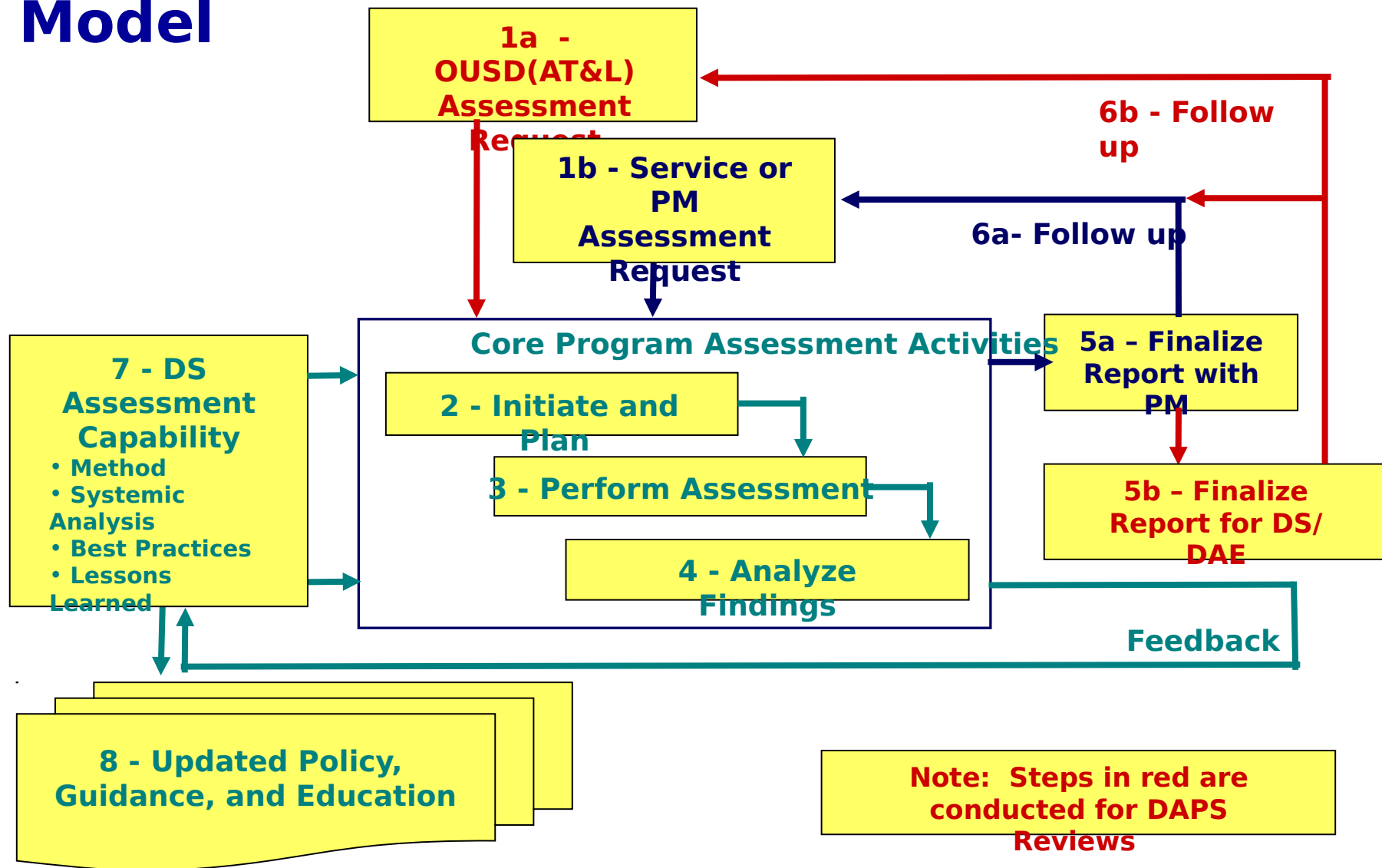


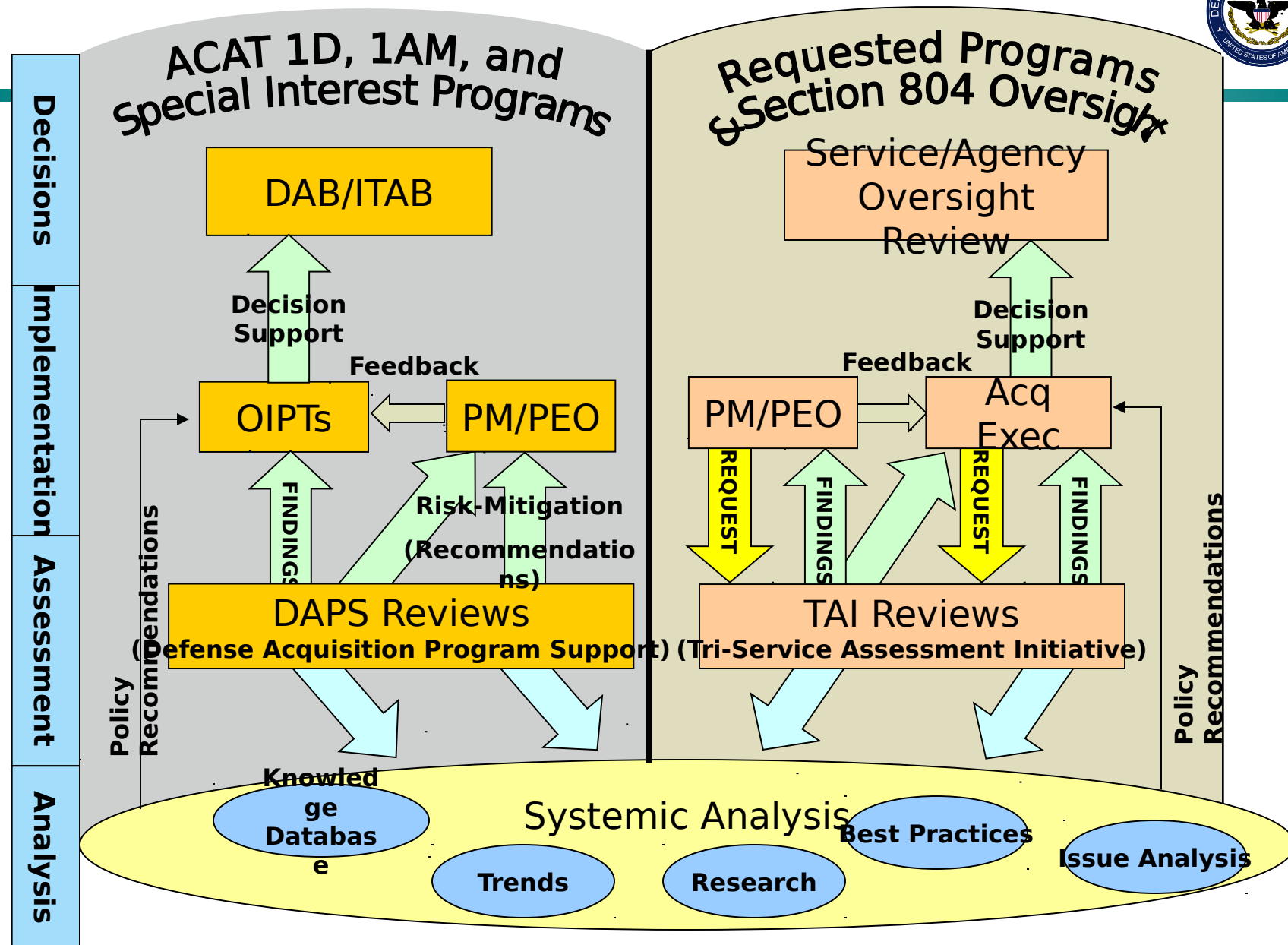
# DAPS Assessment Methodology

- ❑ **Mission Capabilities/Requirements** - Clarity and stability of mission requirements and implication for system requirements/constraints, program structure and execution
- ❑ **Resources** - Adequacy of funding and assets available to meet program objectives
- ❑ **Management** - Capability, planning, tools, and techniques used to manage the program
- ❑ **Technical Process** - Capability and utilization of systems engineering tools and techniques applied to product development
- ❑ **Technical Product** - Maturity and adequacy of product(s) and services being acquired (includes hardware, software, producibility considerations and logistics support)
- ❑ **Environment** - Impact of statutory and regulatory requirements

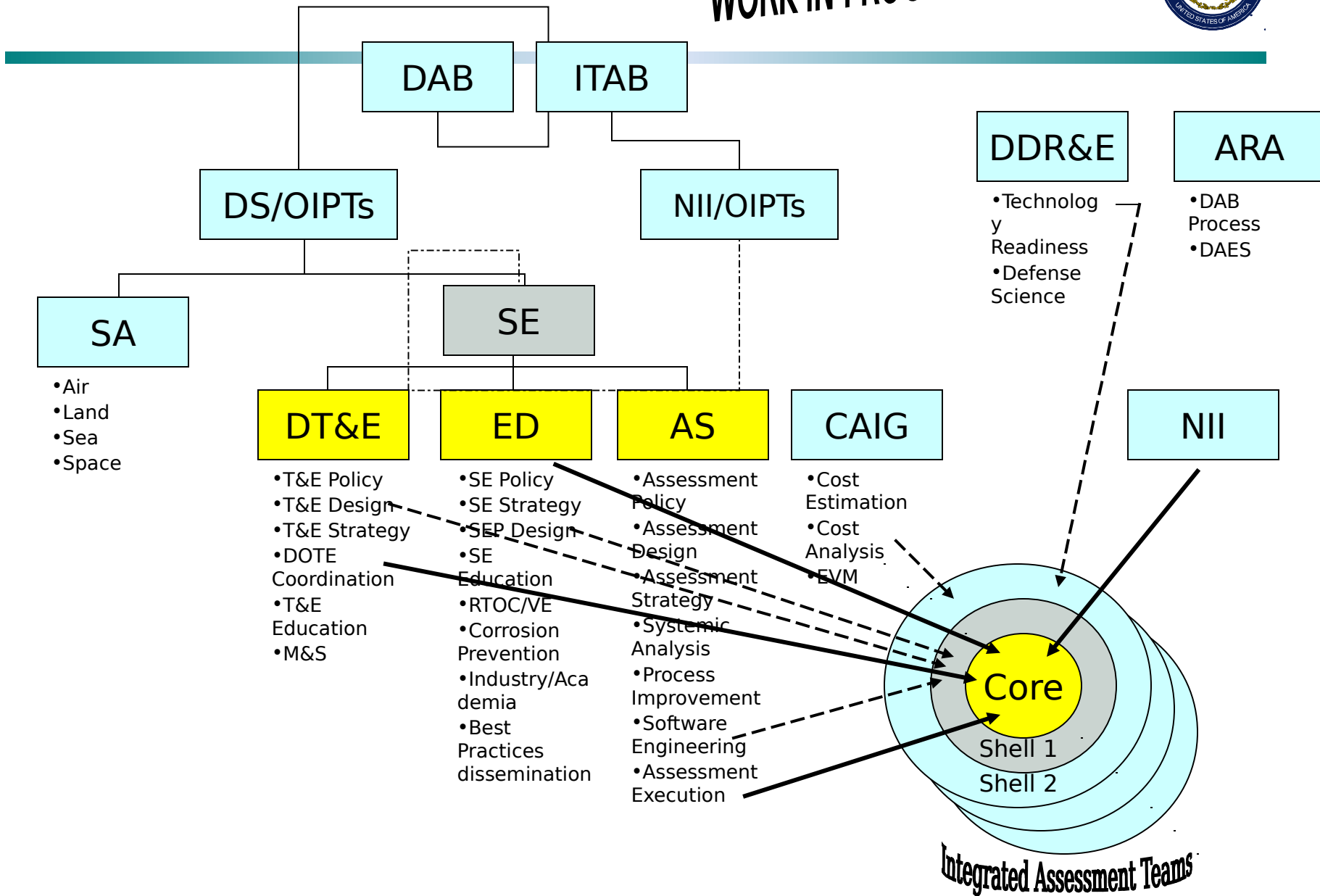


# Defense Systems Review Process Model





# WORK IN PROGRESS - DRAFT PROPOSAL

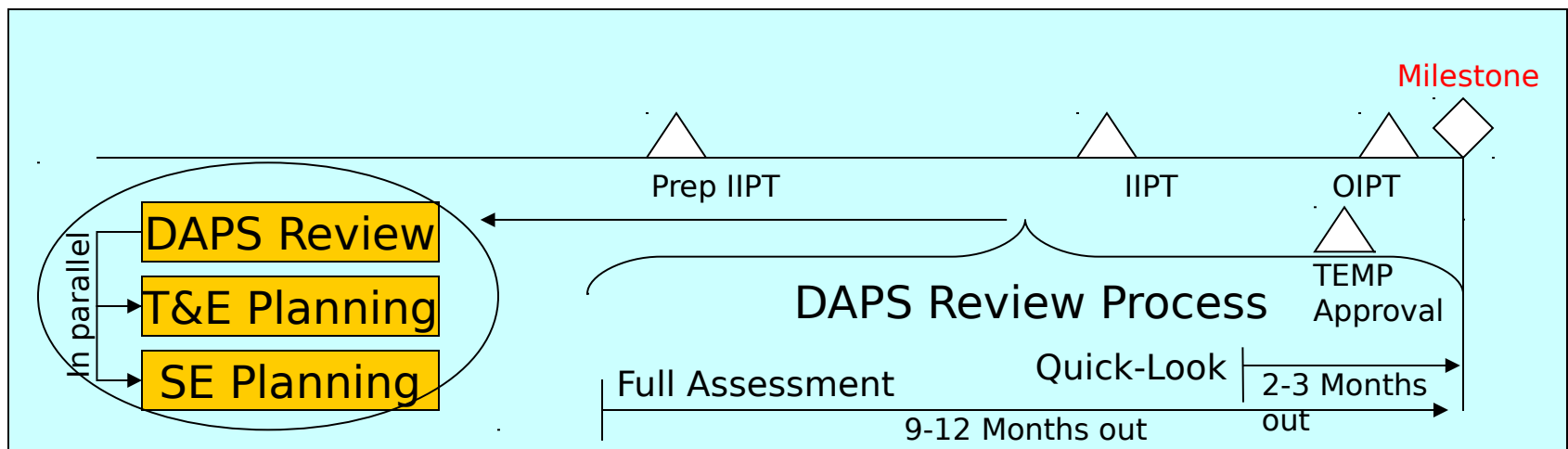






# DAPS Review Products

- ❑ The Team's top-level products:
  - » Full Assessments conducted 9-12 months before Milestone
    - > Detailed findings, risks & actionable recommendations
    - > Conducted in "PM support" vice "OSD oversight" mode
  - » "Quick-Look" reviews conducted 2-3 months before Milestone
    - > Same form and formats as full assessment; conducted "for record" review
  - » Quarterly Defense Acquisition Executive Summary (DAES) assessments inputs
  - » Test & Evaluation Master Plan (TEMP) and Systems Engineering Plan (SEP) development and approval





# DAPS Team Accomplishments

- ❑ Successfully completed 3 pilot assessments 2<sup>nd</sup> Qtr FY04
  - » VXX Presidential Helicopter
  - » Multi-mission Maritime Aircraft (MMA)
  - » Extended Range Active Missile (ERAM) Standard Missile 6 (SM-6)
- ❑ DAPS Assessment Methodology training conducted
  - » 14 graduates to date; 32 more graduates within next 2 weeks
- ❑ Defense Systems SE and Developmental Test & Evaluation offices combining to provide early & continued engagement with program offices
  - » “One Face to the PM”
  - » Brings 5 government and 30 contractors to the DAPS Review team
- ❑ Continuing to team with OSD Cost Analysis Improvement Group to exploit synergies
  - » Reduce burden of multiple reviews on the PM
- ❑ Identifying a ASD(NII) team lead to review Business System programs
- ❑ Planning to conduct DAPS reviews on 30+ programs in 2004
  - » 189 programs on T&E oversight distributed to 11 team leads
  - » Will conduct DAPS reviews on ACAT 1D and IAM programs
  - » Will continue to conduct fee-for-service reviews for the Program Manager and Services



# Bottom Line

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- ❑ **Defense Systems is working to support the USD(AT&L) imperatives to improve systems engineering with the Department of Defense**
- ❑ **Both the DAPS (oversight) and TAI (PM support) program reviews are intended to improve the executability of programs as they progress through the acquisition process**
  - » Defense Systems solicits early and open involvement with programs
  - » Solicits team members from the Services

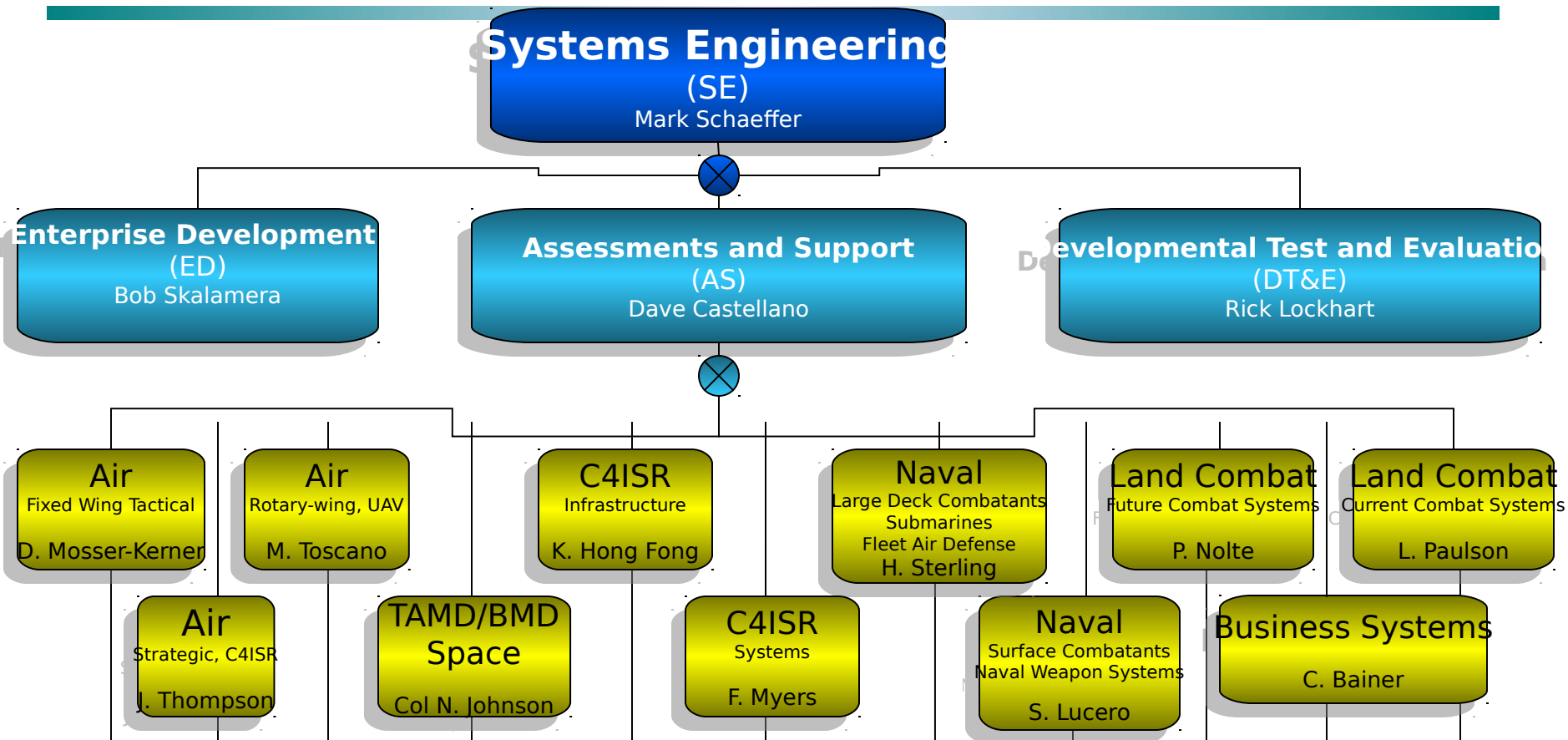
Questions?

# Back-up slides

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# Defense Acquisition Program Support Integrated Assessment Teams



## FY-04 Assessments Assigned

• F/A-22	• ACS	• VXX	• PAC-3	• GCCS-J	• DCGS-A	• CVN-21	• DD(X)	• MMA	• DIMHRS	• Stryker
• F-35	• ACS-J	• JCM	• MUOS	• NCES	• FBCB2	• LPD-17	• LCS	• BAMS	• CHCS-II	
• B-2 RMP	• E-2 RMP	• H-1Upgrd.	• AEHF		• JPALS	• SSN-774	• ERAM	• FCS	• DCD/DCW	
• KC-767A		• PRV	• GPS-III		• GCCS-A	• CEC			• TMIP	
• MPS			• V-22						• TC-AIMS II	
									• DTS	

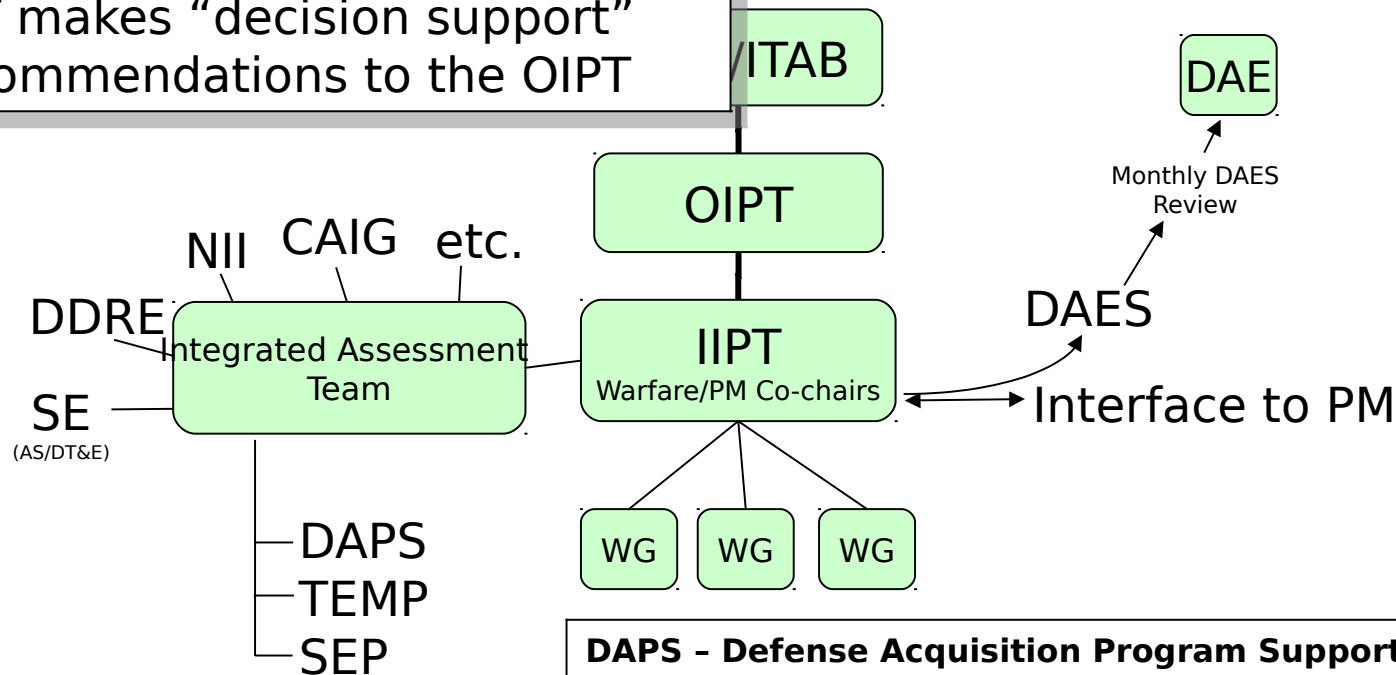
# Acquisition Oversight and Integrated Assessment Team Approach



## Rules of Engagement:

- Integrated Assessment Teams work in support of the IIPT process
- IIPT works to resolve issues with PM
- IIPT makes “decision support” recommendations to the OIPT

WORK IN PROGRESS - DRAFT PROPOSAL



**DAPS - Defense Acquisition Program Support**  
**ITAB - Information Technology Acquisition Board**  
**TEMP - Test & Evaluation Master Plan**  
**SEP - Systems Engineering Plan**



# Process Step 1

## Oversight Assessment Request Process

- **D, Systems Engineering staff works with System Acquisition (SA) Deputy Directors to identify program milestone dates and assessment needs**
  - » Each AS specialist serves as a liaison with a warfare office and DT&E
    - > Has access to DAES reports, OIPT reports, and ADMs
    - > Insights from DS staff meetings
  - » Triggers: Upcoming OIPT, DAB meetings, cost/schedule/performance or as identified problems, etc.
  - » Assess need, priority and assessment scope (major or quicklook)
  
- **Precedence given to:**
  - » Programs of interest to USD(AT&L)
  - » Family of Systems/System of Systems
  - » Programs in early acquisition stages or encountering SE problems
  - » Programs with upcoming OIPT and DAB reviews





# Process Step 1a

## Program Manager Assessment Request Process

- ❑ **PM solicits an independent assessment**
  - » Result of marketing, word of mouth, Service sponsors
  - » AS partners with Services to encourage conduct of independent assessments
  - » Customers include all ACAT levels, all domains, all lifecycle phases
  
- ❑ **Motivation:**
  - » Baseline program risks
  - » Support Milestones & decisions
  - » Assist with identified issues
  
- ❑ **PM funds team travel and labor**
  - » Budget analysis and procurement support provided by ARDEC

# Process Step 2

## Initiate and Plan Assessment



- **Meet with Requesting Official(s) to determine scope, initial concerns, and products**
  - » DS meeting with Services may be warranted on high profile programs
- **Prepare Assessment Plan**
  - » Scope, initial issues, schedule, and required site visits
  - » Identify team lead and team members
    - > Leverage strengths of AS team members and expertise of outside organizations
    - > Teaming brings “purple flavor” to assessment process
    - > DoD teaming partners
      - DS (System Assessment, System Integration, Developmental Test & Evaluation); ASD(NII), Joint Staff (J-8, J-6); Joint Interoperability Test Command; DUSD (Logistics and Material Readiness); and DDR&E
    - > External teaming partners
      - Services, FFRDCs, Centers of Excellence, Agencies, Academia, Industry
    - > Establishing funding mechanisms to expedite obtaining their expertise, when needed
  - » Brief assessment plan to program office
- **Collect program data and background information**
  - » Access to program documentation provided to team members on a common drive
- **Hold initial team meeting**
  - » Discuss goals, background info and assessment plan
  - » Designate responsibilities. Identify and fill technical expert voids
  - » Conduct assessment training

# Process Step 3

## Perform Assessment



### ❑ **Prepare for site visits**

- » Team lead collects team comments on background information and experience
- » Team members prepare discussion strategies
- » Provide site with top level issue areas
- » Coordinator works with site rep and prepares travel arrangements

### ❑ **Site visits**

- » Team leader provides short presentation on scope of review
- » Site manager provides site overview briefing
- » List of requested briefings and discussion areas updated
- » Discussions are conducted with program team personnel individually
- » Team leader consolidates findings and issues from team
- » Team “hot wash” held after each day’s meeting
  - > Strengths, weaknesses, action items, and areas that require more probing captured
- » Site visit exit brief conducted
  - > To discuss initial observations with site management
  - > Opportunity for feedback
- » Site visits may be merged with CAIG and independent review teams, when practical

# Process Step 4

## Analyze Findings

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- ❑ **Analyze findings and prepare report**
  - » Team meets approximately one week after site visit(s)
  - » Synthesize findings, risks, and recommendations in each area
    - > Team leader leads team to consensus on the issues and risks
  - » Determine primary root causes and issue interrelationships
  - » Determine issue prioritization and recommendations

# Process Step 5 and 5a Report



## ❑ **Tailored Products:**

- » IIPT and OIPT presentations
- » White papers in key areas (e.g., SE process, software, T&E, risk management, technical issue, etc.)
- » Recommended ADM language and entrance criteria, as applicable
- » Full text reports, as necessary
- » Quicklook reports in specific areas

## ❑ **Oversight assessments outbriefed to:**

- » PMs and lead engineers (govt and contractor)
- » D,SE and appropriate DD, SA
- » Dr. Lamartin
- » USD(AT&L), as requested

## ❑ **PM assessment outbriefed to:**

- » DD, AS for peer review
- » PM for comment, consensus
- » Products can only be shared with D, DS if authorized by Program Manager



# Process Step 6 and 6a

## Assessment Follow-up Activities

### ❑ **Oversight Assessments:**

- » Work with DD, SA customer to track closure of recommendations and effectiveness
- » Selected team members maintain pulse of DAE interest programs
  - > Attend design reviews, program reviews, selected test events, WIPT/IIPT meetings, etc.
  - > Review program documentation, including DAES reports as time permits
    - Maintain visibility into issues
    - Assess trends across programs
- » Schedule follow-up assessments, as warranted

### ❑ **PM Support Assessments:**

- » Survey conducted 6-12 months post assessment to track implementation and improvement
- » PMs encouraged to discuss actions taken at OIPT reviews

# Process Step 7

## Assessment Capability Feedback



- ❑ **Maintain and improve assessment framework**
  - » Process Model
  - » Templates, tools, reference materials
  - » Conduct assessment training for all team members
- ❑ **Document lessons learned from assessments**
  - » Collect customer and team member feedback
  - » Continuous process improvement loop
  - » Track performance measures
- ❑ **Perform systemic analysis of assessment results**
  - » Systemic analysis of repeated issue patterns and primary performance impacts
  - » Best practices identification and measurement
    - > Post to DS Website and SE Community of Practice
  - » Detailed data analysis briefings, case studies, recommended actions
  - » Formulate global recommendations for acquisition improvements
    - > Decision processes, DoD policy and guidance, training & education, etc.



## □ Disseminate systemic issues and lessons learned

### Process Step 8

### Updated Policy, Guidance, & Education

- » Across Defense Systems to improve oversight process
  - » Brown Bag lunch presentations
    - > Watch areas for each acquisition phase
- » Across AT&L to jump start global improvements
  - > Inputs to DoD policy and guidance
- » To the DoD community to share lessons learned
  - > Post Best Practices to DS Website and SE Community of Practice
  - > Presentations to Services, DAU, and Industrial Associations
  - > Provide DD, Enterprise Development with inputs to training & education
    - SPRDE, T&E, and PQM Functional Integrated Product Teams





# Oversight vs. Support Assessments

## Oversight Assessments

- ❑ **Requested by DAE or Director, DS**
- ❑ **Funded by Director, DS**
- ❑ **Focus:**
  - » State of health of the program
  - » Tailored to specific DAE/DS concerns and milestones, as well as PM needs
- ❑ **Report provided to Director, DS or DAE after review with the PM**
- ❑ **Defense Systems and PM control release of the findings**
- ❑ **Generic data entered into Systemic Database**

## Support Assessments

- ❑ **Requested by Service or PM**
- ❑ **Funded by PM/PEO**
- ❑ **Focus:**
  - » State of health of the program
  - » Tailored to specific PM concerns
- ❑ **Report provided to the PM/PEO**
- ❑ **PM/PEO controls release of the assessment findings**
- ❑ **Generic data entered into Systemic Database**

# Improved Acquisition Performance

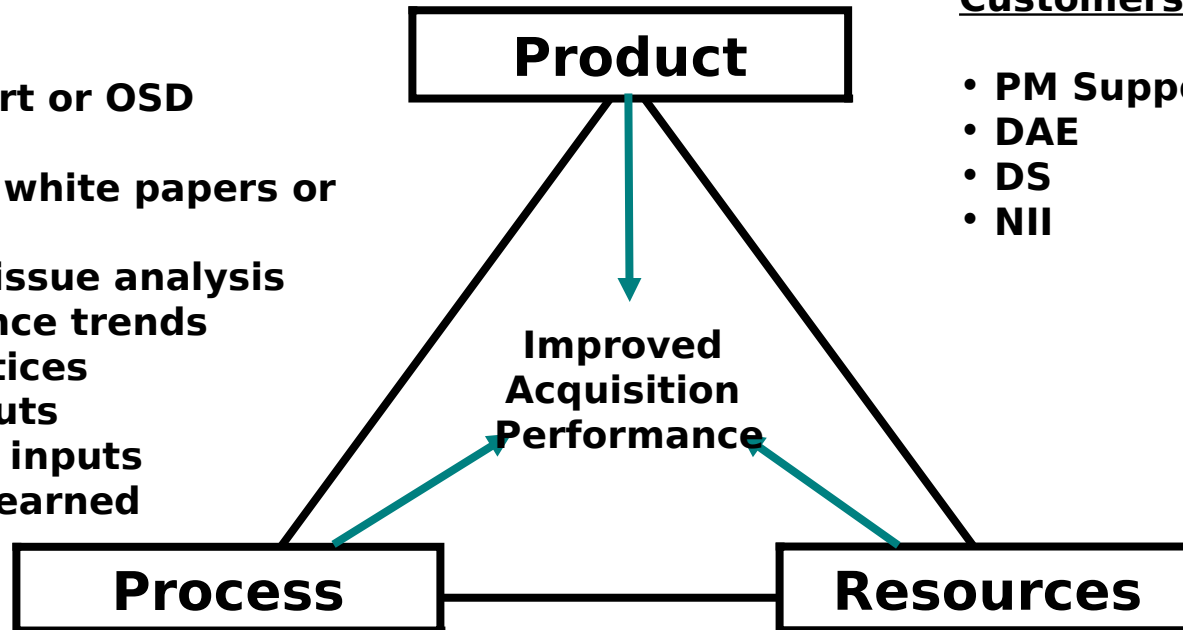


## Products:

- PM Support or OSD Oversight
- Briefings, white papers or reports
- Systemic issue analysis
- Performance trends
- Best Practices
- Policy inputs
- Education inputs
- Lessons Learned

## Customers:

- PM Support
- DAE
- DS
- NII



## Process:

- Select and schedule assessments
- Plan and conduct assessments
- Scalable for quick-look or major milestone review
- Can accommodate both “requirements” and “capabilities” based programs
- Continuous improvement

## Resources

- Defense Systems SE staff
- DoD and external team members